

**Amendments to the Abstract:**

Please replace the abstract on page 14, with the following paragraph:

Determinations by of perfusion on the body of a living being are possible by detecting a dye bolus injected into the body by irradiating radiation into the body and detecting the response radiation occurring on the surface of the body. The aim of the invention is to make it possible to reliably carry out these determinations with a simple compact and transportable device. To this end, a fluorescent dye is injected, and optical excitation radiation is irradiated into the body, and a temporal relation between a fluorescent radiation, which is triggered by the excitation radiation, and the excitation radiation is measured.